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# Pigeon And Crows Population Control By Trapping

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## ABSTRACT

Feral pigeons (Columba Livia) are safety problem all around the airdrome, as they fly in big, dense flocks crossing the runways. Pigeons are also one of the worst Foreign object damage In the hangars and are environmental and health hazard. Hooded crow is found around runways in Israeli air-bases, due to the thick vegetation thet can be found in the bases.

Other methods for bird population control in use now are either repulsing (glue, spikes, nets) or eliminating (poison, shooting).

Trapping is environmental friendly, cost-effective long term solution, with a history of thousands of years.

Forest Ecological Solution is implementing a trapping method which is based on three pillars : Ornithological knowledge about the bird; Patented mechanical traps (Ecotraps®); Environmental understanding.

The success of Ecotraps in proven different climates and geographical areas for over six years, with the excellent results of first year drop of 95% and maintaining low population level, for as long as the trap is in use.

**M A I N T O P I C S - Pigeons, Crows, Trapping.**

# P I G E O N S

## B A C K G R O U N D

Feral pigeon (Columba Livia) is a bird that thrives in man close vicinity. As such, they can be found in most man-made structures and environments. Any airdrome, with it's big hangars and the absence of natural predators, attracts pigeons as a safe nesting and resting areas.

This is the reason that we can see pigeon, mainly in morning and evening time, crossing the runways in dense flocks and posing a direct safety risk. However, the risk is not limited to the runways. We find pigeons in hangars, digesting at night and living the airplanes and equipment below covered with their highly acidic secretion. Pigeons drop can penetrate through the paint and some of the alloys in use, harming expensive equipment and endangering human lives.

In addition, pigeons may carry up to 22 different parasites that can be transferred to man by direct contact with the dead animal or by contact with it's feather or secretion.

## T H E R A T I O

Many companies and bodies in the world deal with pigeons over population in many different ways. Generally, we can divide these methods to two main options. The first is repulsing the birds and the second is by population control.

Repulsing the bird is an expensive procedure in which we should apply glue or spikes to thousands of meters of potential bird resting areas, and maintain those devices. We can also try to seal the structure with nets or to use one of the new electronic- ultrasonic machines. According to our 15 years experience, as well as to our customers feedback, these ways are very costly not effective.

The other option, population control, can be done by shooting, poisoning or trapping.

Shooting may cause three problems : A) Damage to structure and equipment. B) The pigeon population is indeed effected by shooting but it rise again after a month or two as new flocks are coming to use this niche. C) living dead birds on the ground. Furthermore, most military air-bases do not allowed to use this method.

Poisoning creates a serious environmental problem, as the entire domain, as well as other animals, can be affected by the toxic substance used. It is against our principals to use this method, and actually, it is illegal in most countries.

As we observe the bird's habits and life cycle, as well as other methods in use now, we can see that solution to pigeon over-population should have the following characteristics : Pondering the whole domain, eliminating only the specific birds (not repulsing them), environmentally friendly, a long term, cost effective.

**Trapping** is the only solution that can answer all of the above.

## T H E M E T H O D

*FOREST ecological solution ltd.* came up with the best solution - a sophisticated ecological trapping.

We took the ancient method of trapping and combined it with the most resent ornithological and ecological knowledge. We have conducted eight years of research and field tests before we started to use them commercially, six years ago. Ever since then, we are constantly improving the mechanical device, enabling to reduce the maintenance to minimum.

The refined traps are elaborately places in key positions that were selected after serious observation. Each trap is attracting the pigeons from an area of over 30,000 square meters. One trap can sustain hundreds of birds for about three weeks, so that maintenance can be minimized.

Even though the traps have became more sophisticate, the method have remained the same. The method is base on patterns of the bird behavior over time and in the whole terrain. We consider all ecological elements within the birds normal radius when we choose where to place the traps and who to attract them. This attitude towards the fine environmental circumstances throughout time is the main factor to our excellent results.

## R E S U L T S

Based on experience from Israel International Airport, as well as from all major military airports, the average results figures are shown below.

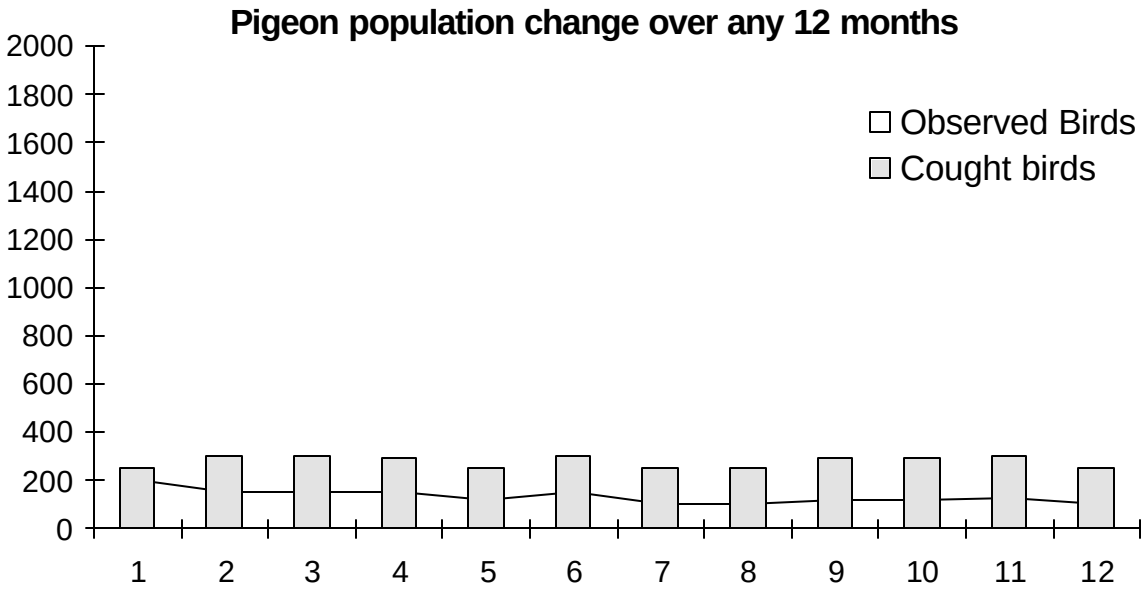
| | Observed Birds | % | Captured birds |
|---|---|---|---|
| At beginning | 1250 | 100.00% | |
| After six months | 500 | 40.00% | 1500 |
| After one year | 90 | 6.40% | 1000 |
| After two years | 20 | 1.60% | 500 |
| After five years | 20 | 1.60% | 300 |

Note the big difference between the numbered of observed and captured birds - there is a constant influx of new pigeon into the domain.

The airports mentioned are located all over Israel, with very different climates, landscapes and agricultural environment. obviously, some of the devices and ingredients were adopted to the variation of the environment, but the principal is the same.

1. First year drop of 95% (!) of pigeon population :

2. Maintaining these low figures for as long as the trap is in place.




### Points of consideration

Even though pigeon is one of the most frequent birds to cause bird strikes, not to mention F.O.D. (Foreign Object Damage), they are mostly considered as maintenance problem in the hangars. Trapping solution is saving maintenance labor and costs. Nevertheless, eliminating this problem in the hangars has many benefits, such as creating more safety environment and eliminating environmental hazard.

For these reasons, it is best if the whole airport would be organized as a whole to solve the problem. This approach, that is common to military bases, have two benefits:

1. Reducing maintenance and the cost of this solution.
2. The bird population is reduces in the whole territory, thus more effectively.

## C R O W S

### The Problem

The hooded crow () is of the most common species of birds that live in men's close vicinity, especially in the middle east.

Most of the Israeli air-bases are covered with thick vegetation and high trees, mainly eucalyptus, for camouflage reasons. The hooded crow is nesting on these trees. Crows also feed on dog food, which is given to the hundreds of guard-dogs in each base. In this perfect environment of high trees and plenty of food, Hooded Crows have become a significant and noticeable bird in the base.

Even though there is almost no evidence of collision with crows, maybe due to their high intelligence, they are considered as a safety risk. Due to the big increase in crows numbers, as of this year Forest Ecological Solutions Ltd. was asked to try to solve this problem.

### The Solution

As in the pigeon case, we are using a live trap that attract the crows by both bates and behavior patterns. The mechanical traps have been modified by Forest Ecological Solutions Ltd. to keep low level of maintenance and high attraction levels.

## The Results

1999 is the first year to operate these Crow traps, thus we do not have any statistics that can be analyzed. However, during these few months of activity we have came to the following conclusions :

1. The traps trap crows in big numbers.
2. Despite our efforts and guiding, there is still the problem of the availability of big quantities of dog food in the base.
3. Maintenance of the trap is damaged by "nature loving " personal of the bases that some time destroy the traps and release all birds.

## Points of consideration

As mentioned above, the two main problem for reducing the crows population are reducing the access to food and stopping base personal from jeopardizing the tapping. Since the crow traps must be placed on the ground, and guard dogs must still be present in big numbers in the base, educating the staff is the only way for this solution to work.

The mechanical devices and the trap concept are proving to be very effective, judging from the high numbers of bird caught.

## Summary

- Sophisticated trapping is the best way to deal with pigeon and crows over population.
- The airport should be considered as a whole domain.
- The saving on the maintenance and environment control should be taken into consideration.
- Cooperation from all air base personal is nec essary.